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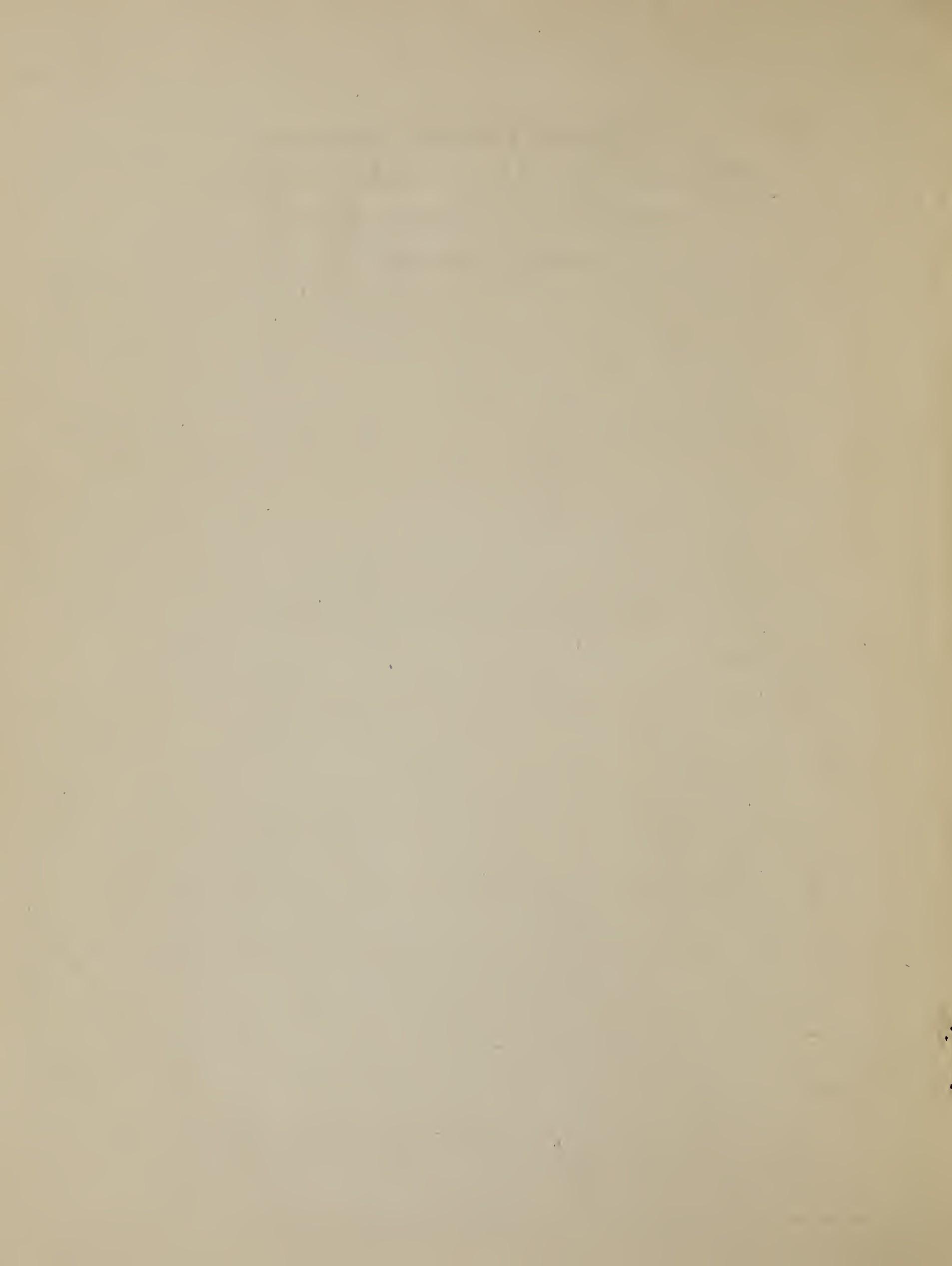
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U. S. Department of Agriculture, Forest Service
FOREST PRODUCTS LABORATORY

In cooperation with the University of Wisconsin

MADISON, WISCONSIN

List of Forest Service Publications on
GLUE, PLYWOOD AND COATINGS



PUBLICATION LISTS OF THE
FOREST PRODUCTS LABORATORY, FOREST SERVICE

Glue, Plywood, and Coatings

This list, which begins on Page 3, includes publications that give the results of research by the Forest Products Laboratory on the development of waterproof glues, preparation and application of various glues, plywood manufacturing problems, and coatings and methods of application.

Other lists of publications dealing with the investigative projects of the Forest Products Laboratory are obtainable upon request. They are as follows:

Boxing and Crating

Strength and serviceability of shipping containers, methods of packing.

Derived Products

Chemical properties and uses of wood and chemical wood products, such as turpentine, alcohol, and acetic acid.

Industrial Investigations

Methods and practices in the lumber producing and wood consuming industries; standard lumber grades, sizes, and nomenclature; production and use of small dimension stock; specifications for small wooden products; uses for little-used species and commercial woods; and low grade and wood waste surveys.

Pathology (In cooperation with the Bureau of Plant Industry)

Fungous diseases of trees; decay, molds, and stains in timber, in buildings, and in wood products; antiseptic properties of wood preservatives.

Preservation

Preservative materials and methods of application. Durability and service records of treated and untreated wood in various forms.

Pulp and Paper

Suitability of various woods for pulp and paper; fundamental principles underlying the pulping and bleaching processes; methods of technical control of these processes; relation of the chemical and physical properties of pulps and the relation of these properties to the paper making qualities of the pulps; waste in the industry, e.g., decay in wood and pulp, utilization of bark, white water losses, etc.

Timber Mechanics

Strength of timber and factors affecting strength; design of wooden articles or parts where strength or resistance to external forces is of importance.

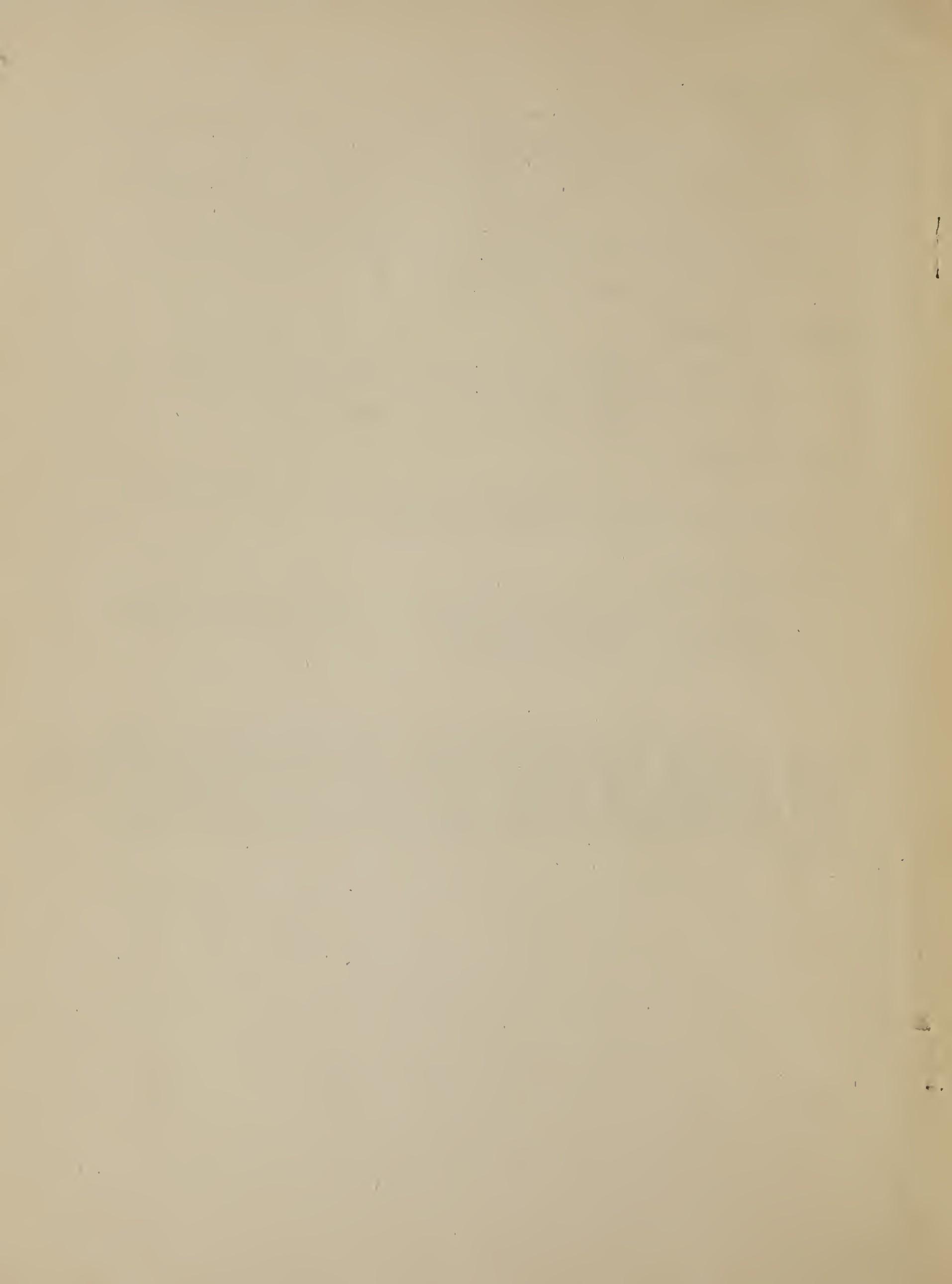
Timber Physics

Experimental and applied kiln drying, physical properties, air drying, steam bending.

Wood Technology

Identification of wood, effect on wood of turpentining and other extrinsic agencies, and structure of wood in relation to its properties.

The Forest Products Laboratory reserves the right to furnish only those publications, available for distribution, which in its judgment will furnish the information requested. Blanket requests or requests for a large number of copies of any individual article will not be filled except in unusual cases.



LIST OF PUBLICATIONS ON GLUE, PLYWOOD, AND COATINGS

TECHNICAL NOTES

(Free on application to the Forest Products Laboratory)

| <u>No.</u> | <u>Title</u> |
|------------|--|
| D-12 | Uneven coatings cause warping |
| F-2 | The strength of commercial liquid glues |
| F-3 | Aluminum leaf to moisture-proof wood |
| F-4 | Water resistant glues |
| F-9 | Foamy glue |
| F-10 | Resistance of animal glue to moist air |
| F-11 | Gluing veneer at high moisture contents |
| F-12 | Effect of number of coats on the moisture resistance of spar varnish |
| F-25 | Calculation of pressure in a hydraulic veneer press |
| F-27 | Comparison of moisture resistance tests for coatings |
| F-31 | Utility of low grade calcium limes in casein glues |
| F-32 | A test of the jelly strength of glue |
| 99 | Effect of oils on strength of glues in plywood |
| 104 | Overheating reduces strength of animal glue |
| 131 | Properties of ordinary wood compared with plywood |
| 132 | Effect of varying the number of plies in plywood |
| 139 | Sunken joints in furniture panels |
| 140 | Stresses in laminated wood construction |
| 142 | When to machine casein glue joints |
| 146 | Removal of glue stains |
| 149 | Strength of screw fastenings in plywood |
| 156 | A convenient humidity table for wet and dry bulb hygrometers |
| 157 | Casein glues exceptionally durable in damp places |
| 170 | Copper salts improve casein glues |
| 181 | Moisture-resistant coatings for wood |
| 184 | Utilization of blue stained lumber |
| 186 | Coatings that prevent end checks |
| 189 | Difference between heartwood and sapwood |
| 193 | Starved glue joints |
| 195 | Some books on paints and varnishes and wood finishing |
| 197 | Veneered and solid furniture |
| 202 | Water-resistant cold press blood albumin glue |
| 207 | Glues for use with wood |
| 211 | Strong and weak joints made with animal glue |
| 213 | The detection and relief of casehardening |

MIMEOGRAPHED REPORTS AND REPRINTS

(Free on application to the Forest Products Laboratory)

(Please give both title and number when ordering)

No.

Title

281-2 Blood albumin glues - their manufacture, preparation and application

281-3 Casein glues - their manufacture, preparation, and application

Data on the design of plywood for aircraft. National Advisory Committee for Aeronautics Report No. 84

475 Drying of plywood panels

Glues used in airplane parts. National Advisory Committee for Aeronautics Report No. 66

285 Manufacture of veneer

543 Notes on the manufacture of plywood

281-6 Resistance of various coatings to moisture

281-1 Animal glues - their manufacture, testing and preparation

What makes glue stick - By T. R. Truax and E. Gerry

Conditions Affecting Making of Glued Joints - By T. R. Truax

Important factors in gluing with animal glue

ARTICLES IN TRADE AND TECHNICAL PRESS

Copies of these articles are not available for distribution at the Forest Products Laboratory, except certain ones which are included in the list of mimeographed reports and reprints. All of these references can be consulted in the original publications.

| Title | Author | Where Published | Date |
|---|------------------------------|--|----------------|
| Hard Water and Glue Mixtures | Browne, F. L. | Veneers | Jan. 1925 |
| Conditions Affecting Making of Glued Joints | Truax, T. R. | Furniture Manufacturer and Artisan | May, 1924 |
| Manufacture of Veneer | Truax, T. R. | Hardwood Record | April 10, 1924 |
| Glues for Manual Training Work | Truax, T. R. | Industrial Education Magazine | March, 1924 |
| Western Woods for Cores in Veneered Panels | Truax, T. R. | Furniture Mfr. & Artisan | Nov. 1923 |
| What Makes Glue Stick | Truax, T. R. & Gerry, Eloise | Scientific American | Aug. 1923 |
| Hygroscopicity of Hide Glues and the Relation of Tensile Strength of Glue to Its Moisture Content | Bateman, E. & Towne, G. G. | Indus. & Engineering Chemistry | April, 1923 |
| Effect of Wood Structure on Glue Penetration | Truax, T. R. & Gerry, Eloise | Furniture Mfr. & Artisan | April, 1922 |
| The Gluing of Wood | Truax, T. R. | The Timberman | Dec. 1922 |
| Glues Used in Airplane Parts | Allen, S. W. & Truax, T. R. | Nat. Advisory Com. for Aeronautics Report No. 66 | 1920 |

| Title | Author | Where Published | Data |
|--|----------------------------------|---|---------------|
| Efficiency of Aluminum Leaf on Airplane Propellers | Knauss, A. C. | Scientific American Monthly | Feb. 1, 1920 |
| Data on the Design of Plywood for Aircraft | Elmendorf, Armin | Nat. Advisory Committee for Aeronautics Report No. 84 | 1920 |
| Water-Resistant Glues | Browne, F. L. | Chemical & Metallurgical Engineering | Aug. 1, 1919 |
| Mechanical Test Made on Plywood | Markwardt, L. J. & Elmendorf, A. | Hardwood Record | July 10, 1919 |
| Testing Glues in Water-proof Plywood | | Veneers | June 1 1919 |
| Moisture Resistant Finishes for Airplane Woods | Dunlap, M. E. | Nat. Advisory Committee for Aeronautics Report No. 85 | |
| Testing Strength of Airplane Wing Ribs 55 to 96 inches | Elmendorf, A. | Automotive Industries | July 31, 1919 |
| Tests on Thin Plywood as a Substitute for Linen in Airplane Construction | Elmendorf, A. | Aerial Age Weekly | Sept. 1, 1919 |

